

FIG. 1

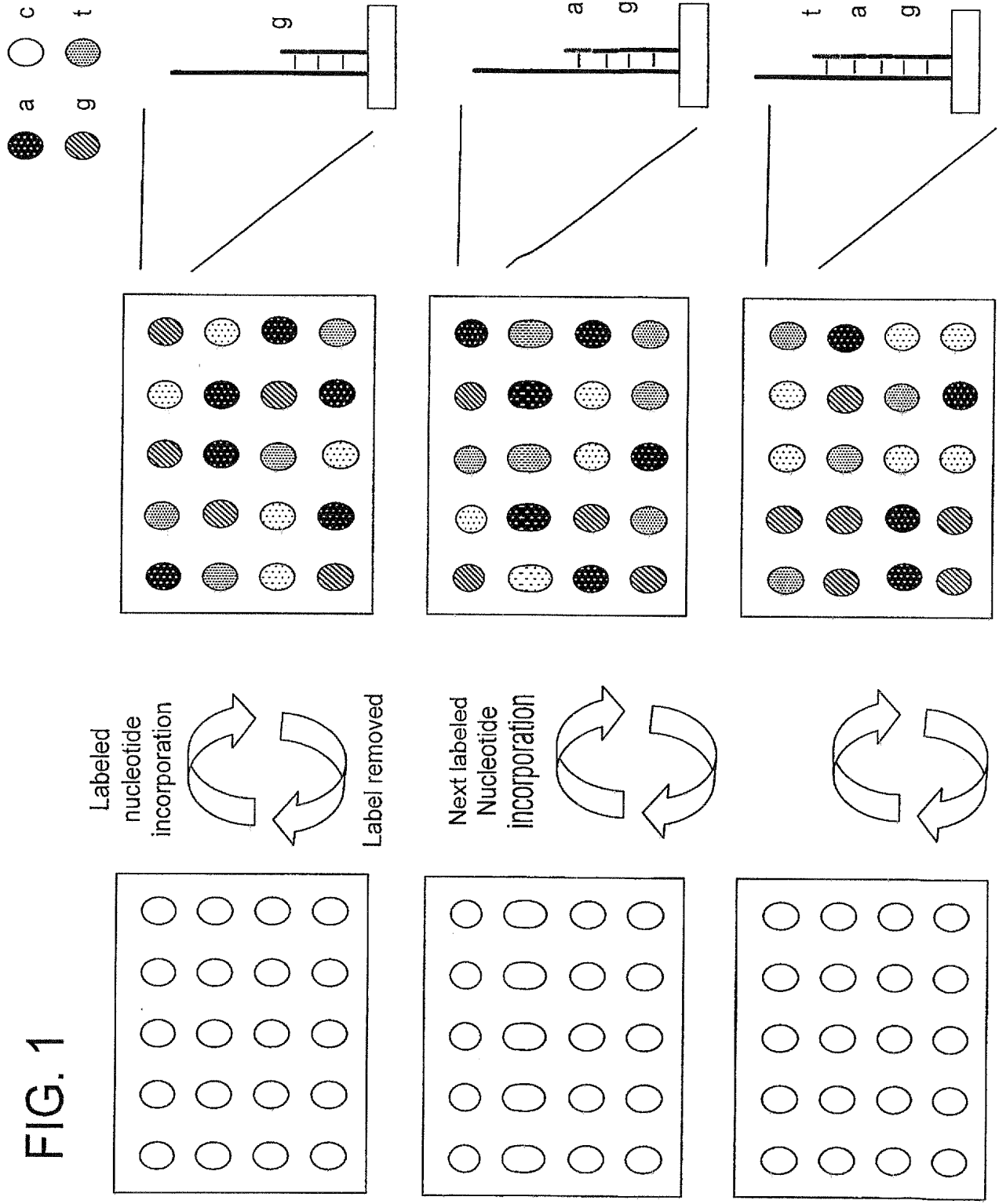
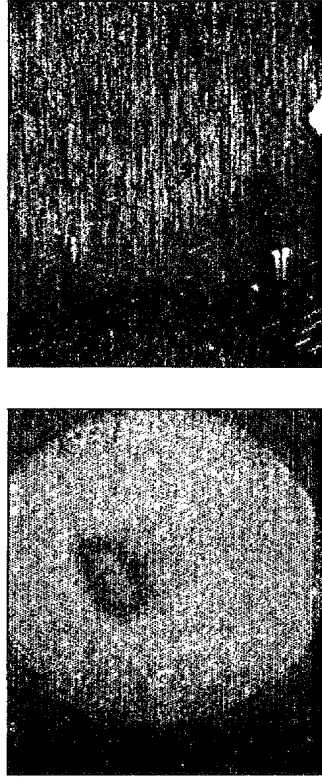
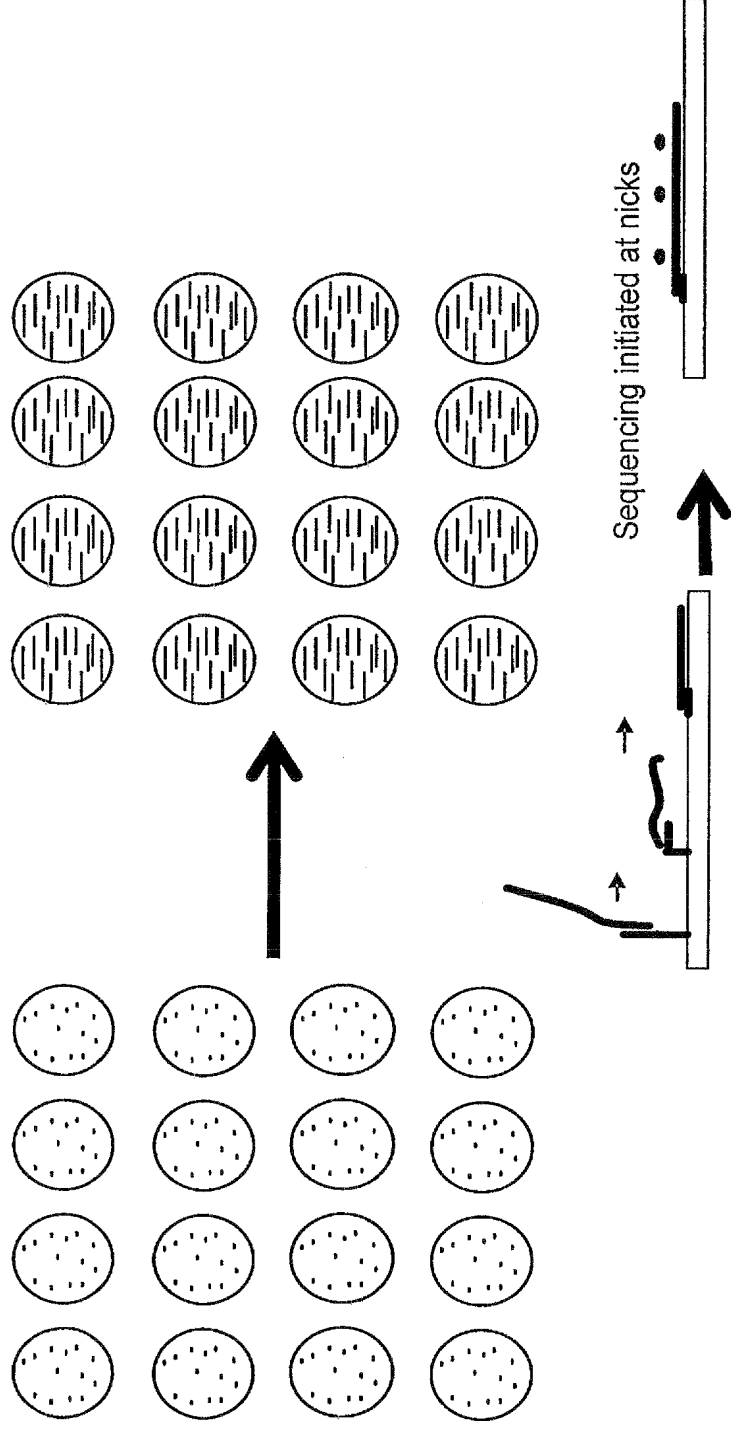


FIG. 2



40x and 100x magnification showing combed DNA



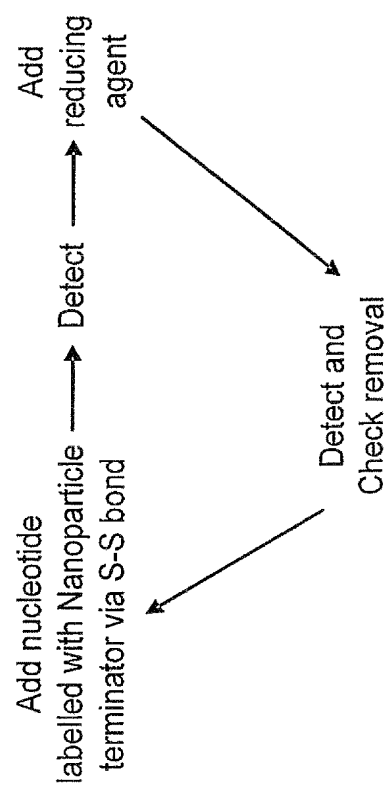
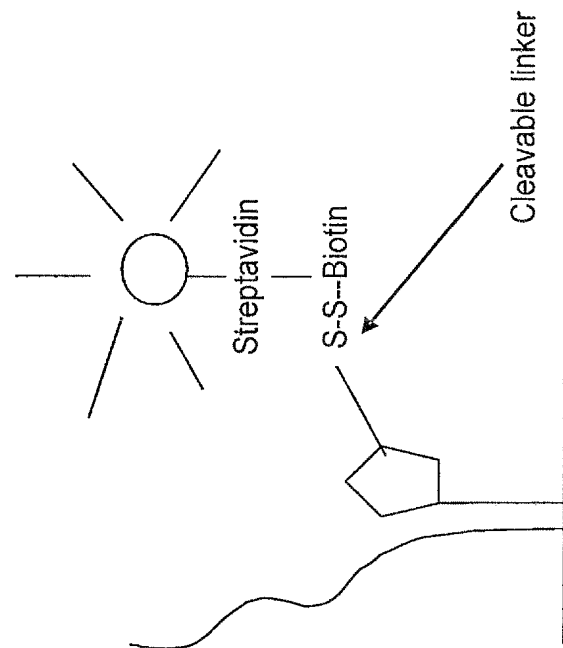
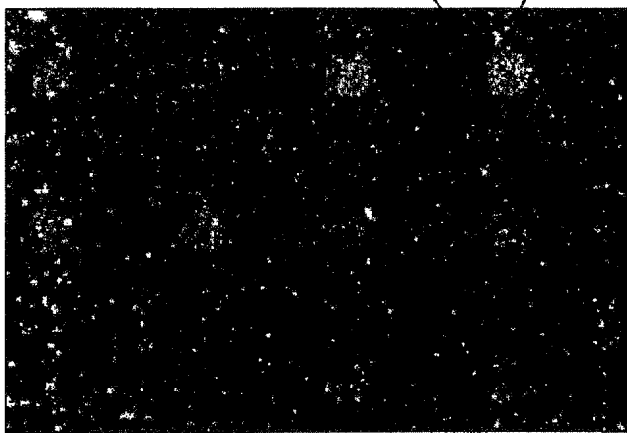
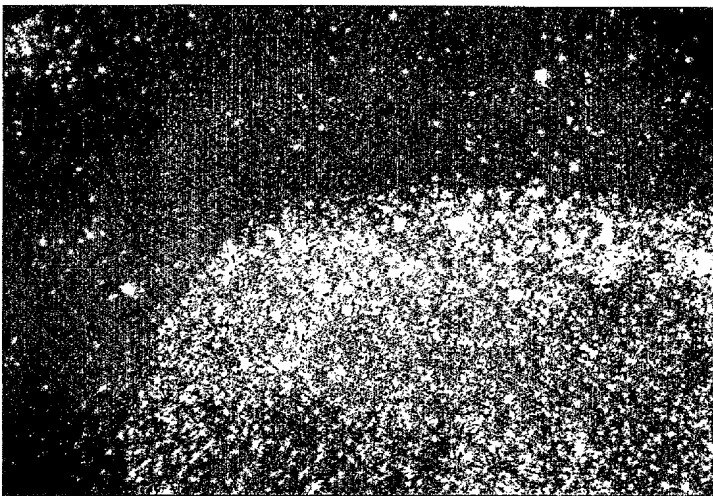


FIG. 3

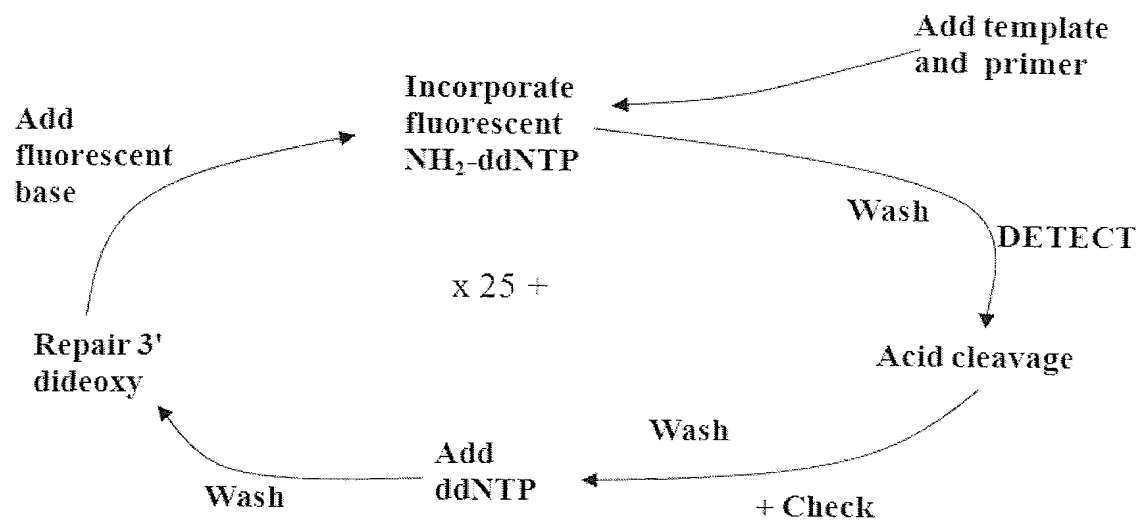


FIG. 4A

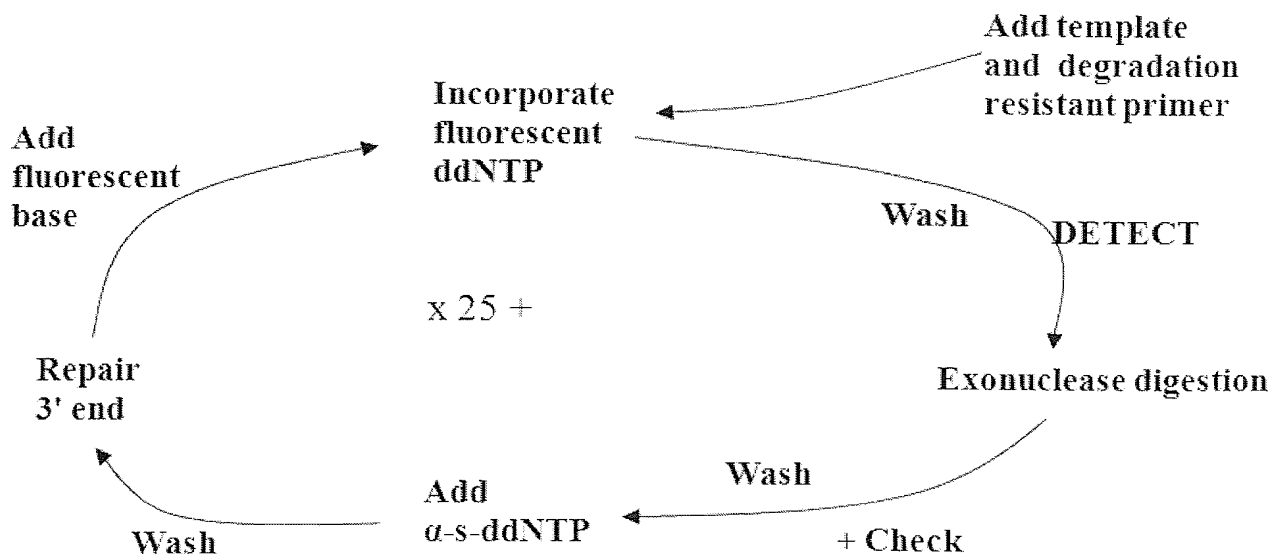


FIG. 4B

FIG. 5

Chemical reaction scheme illustrating the formation of a primer and a quencher pyrophosphate during DNA synthesis.

The reaction involves a **Primer** (a nucleotide with a base, sugar, and a triphosphate group) reacting with a **template** and **DNA Polymerase** to form a **Primer** (a nucleotide with a base, sugar, and a pyrophosphate group) and a **quencher pyrophosphate**.

The **quencher pyrophosphate** is labeled with a **fluorescent label / terminator (R)** attached via a cleavable bond to the base or 3' position.

R = Fluorescent label / terminator attached via a cleavable bond to Base or 3' position

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Scheme 1, Four groups of chemically synthesised randomised oligos for ligation

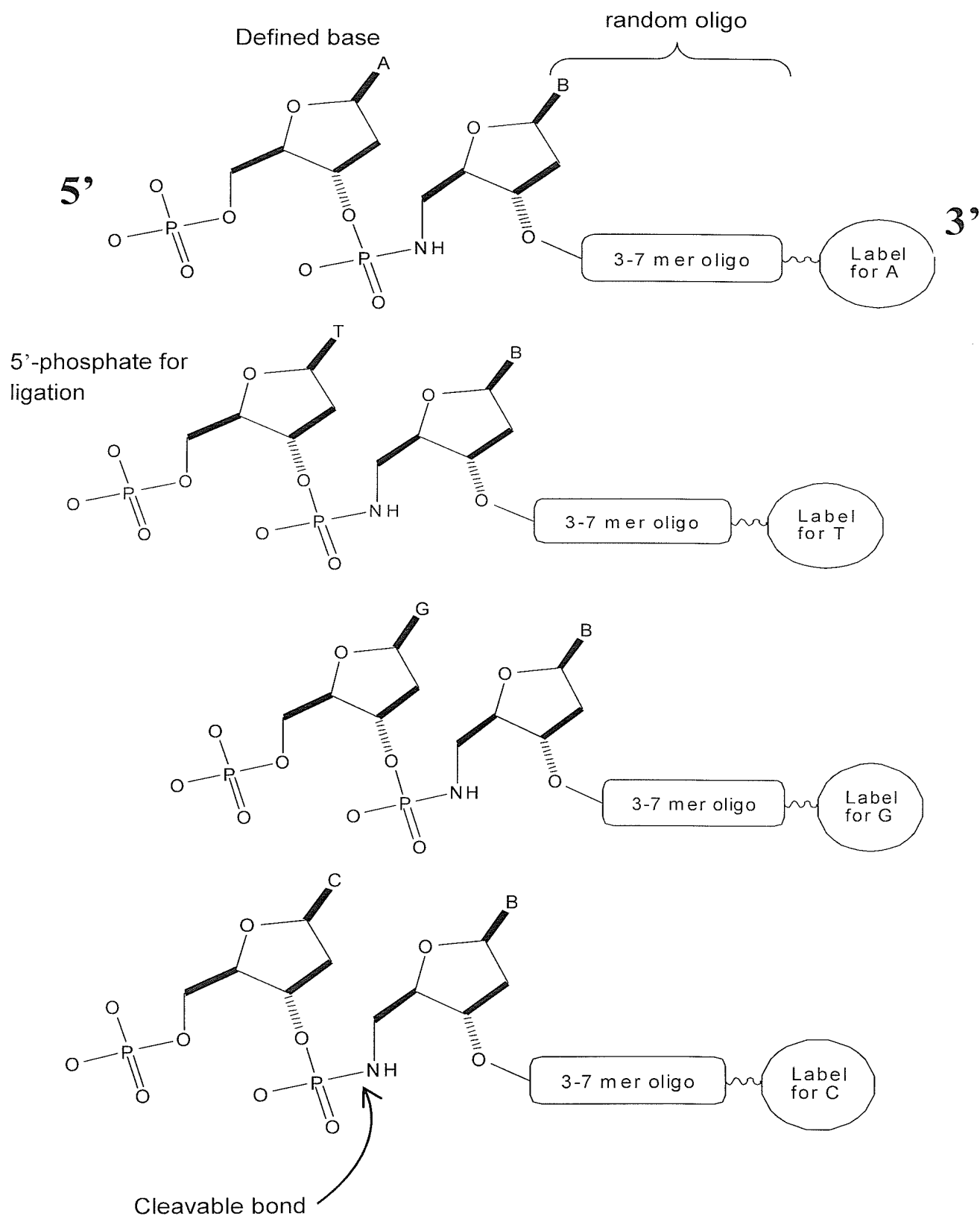


FIG. 6

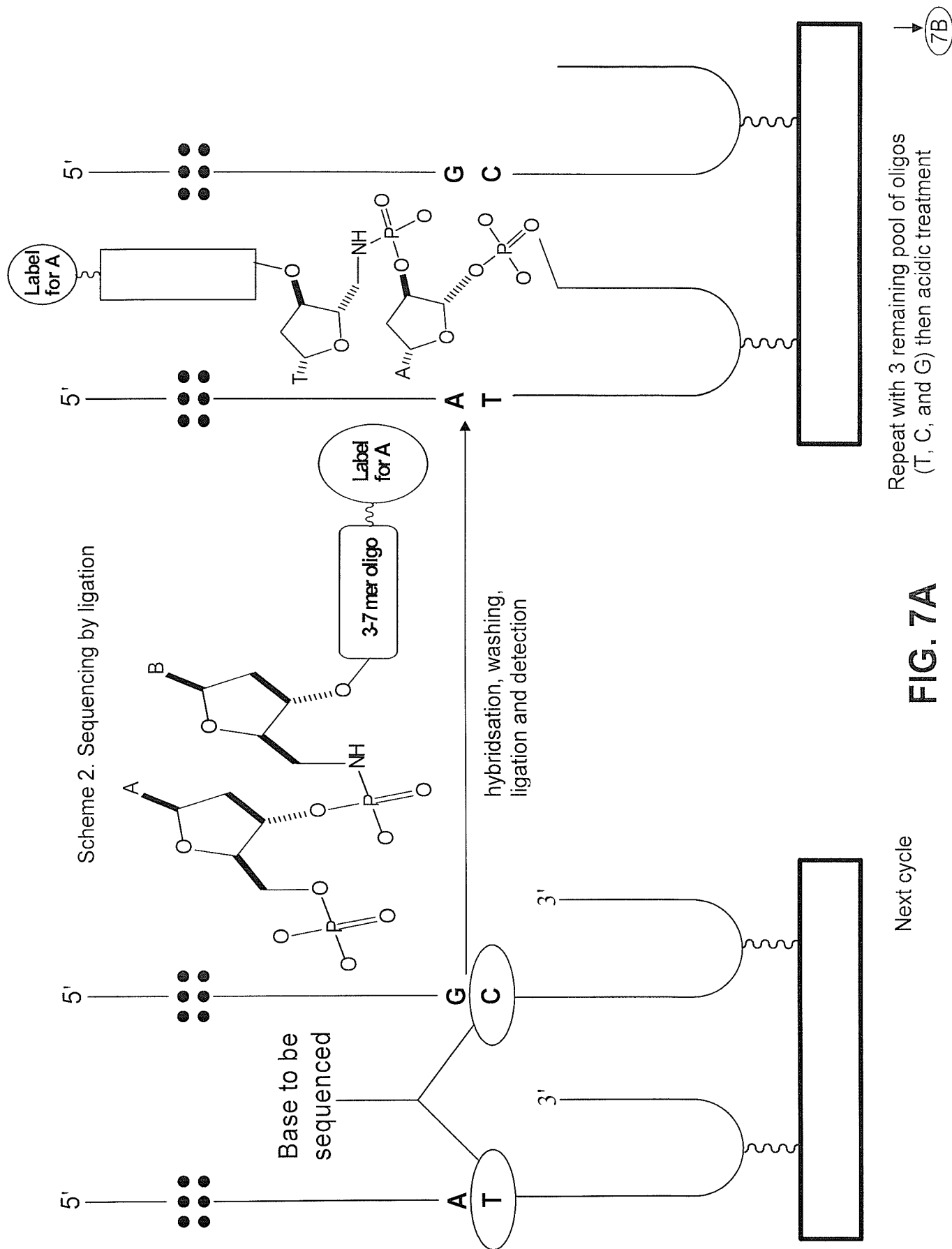


FIG. 7A

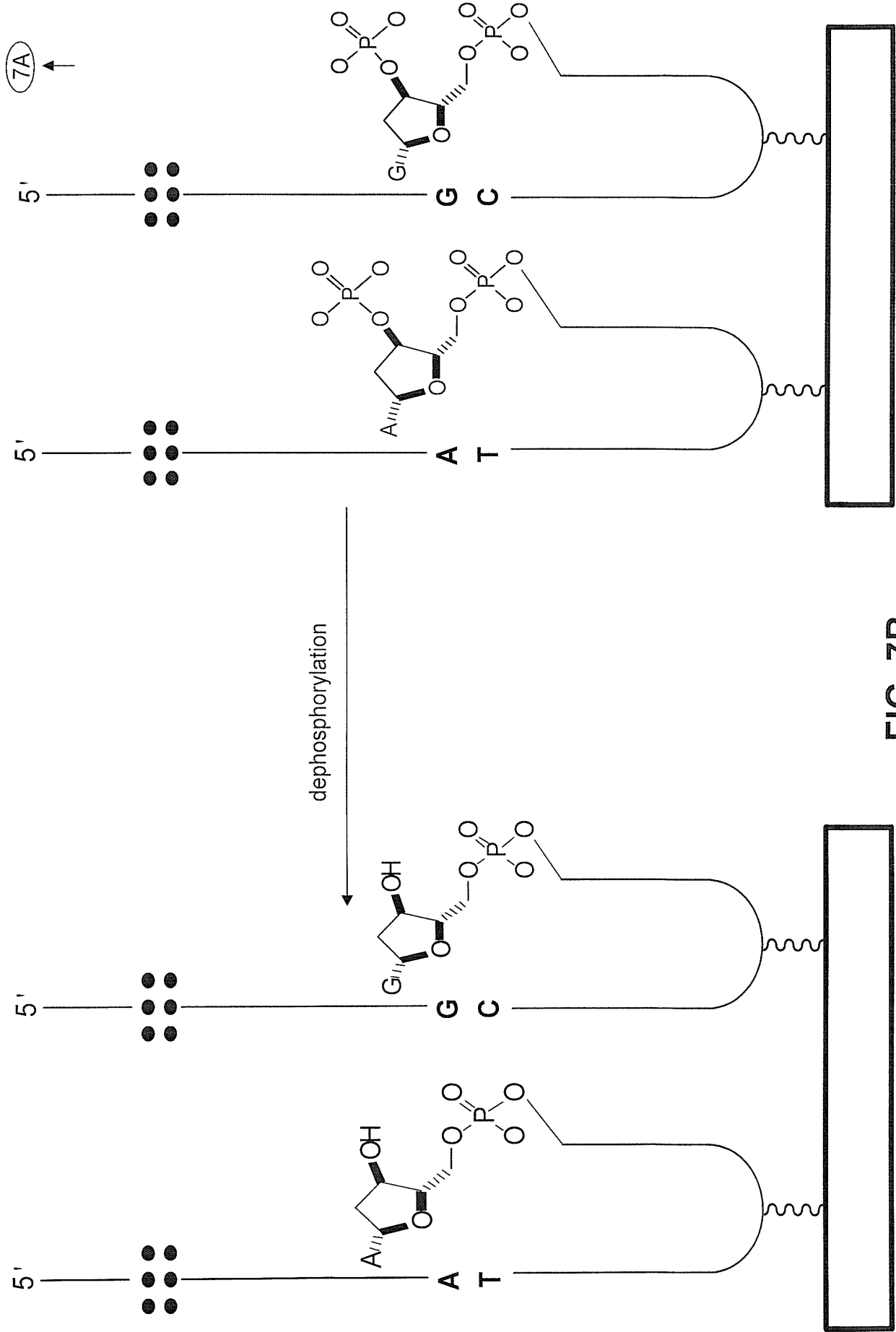


FIG. 7B

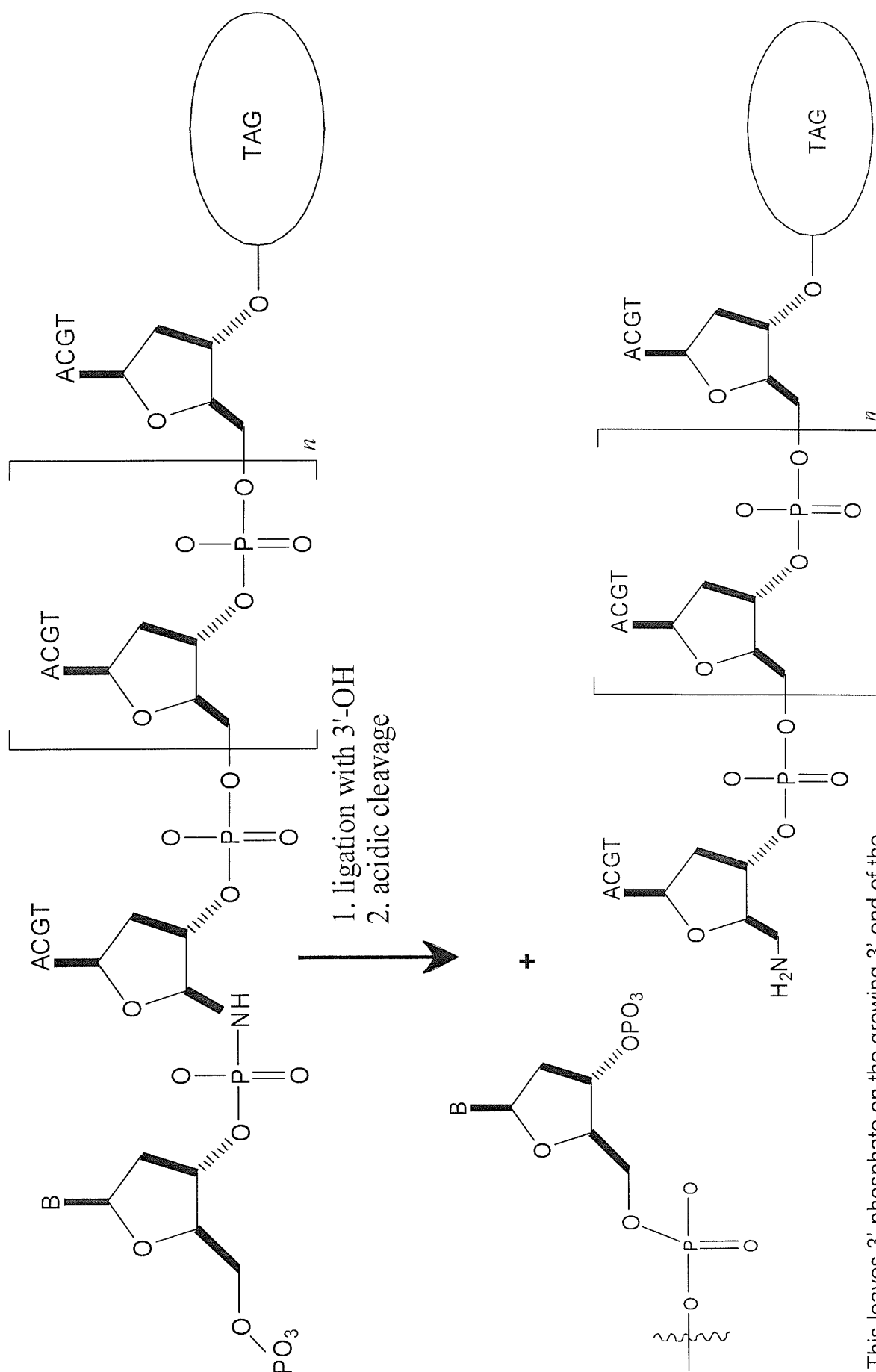


FIG. 8A

This leaves 3'-phosphate on the growing 3'-end of the primer, which needs to be removed.

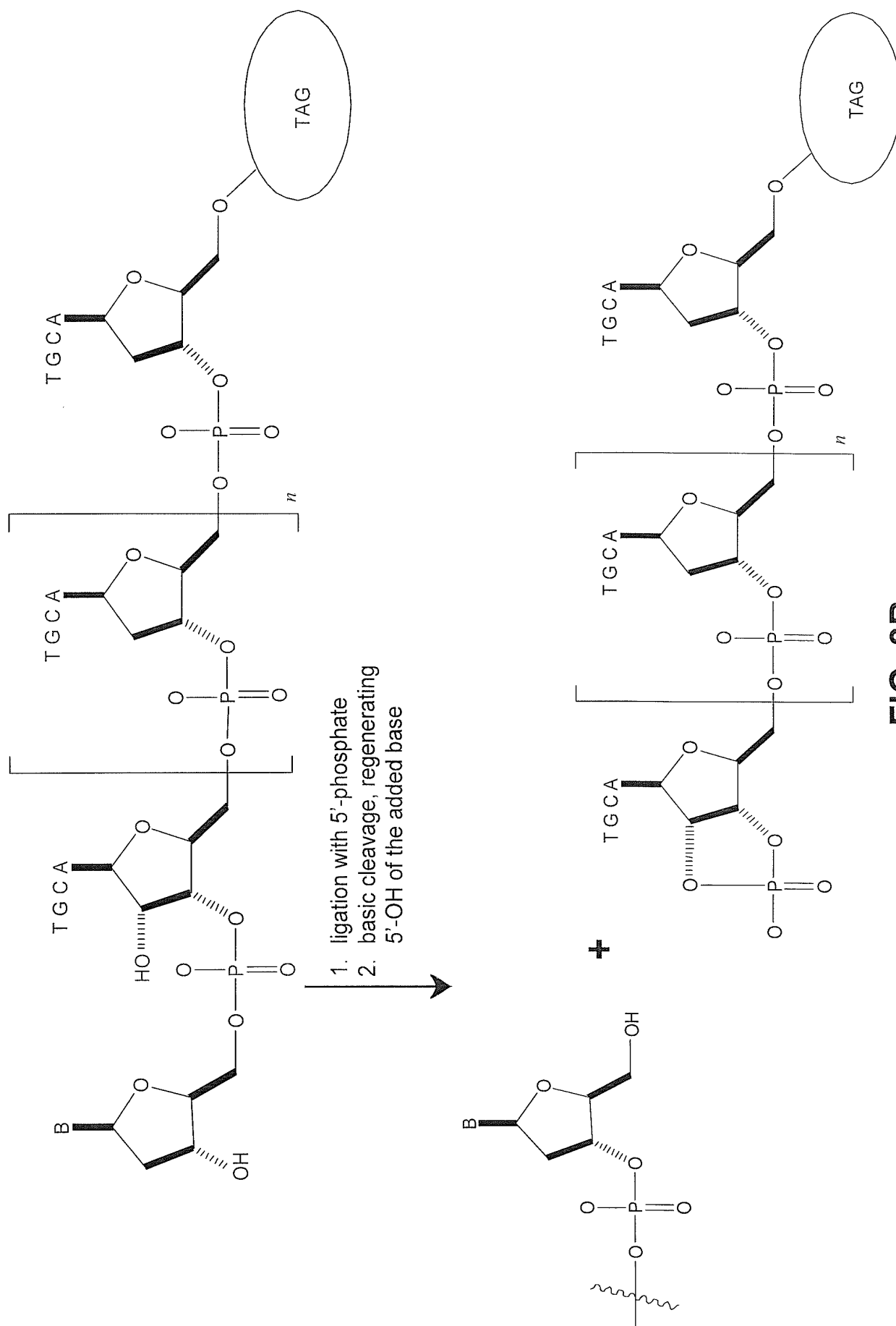


FIG. 9

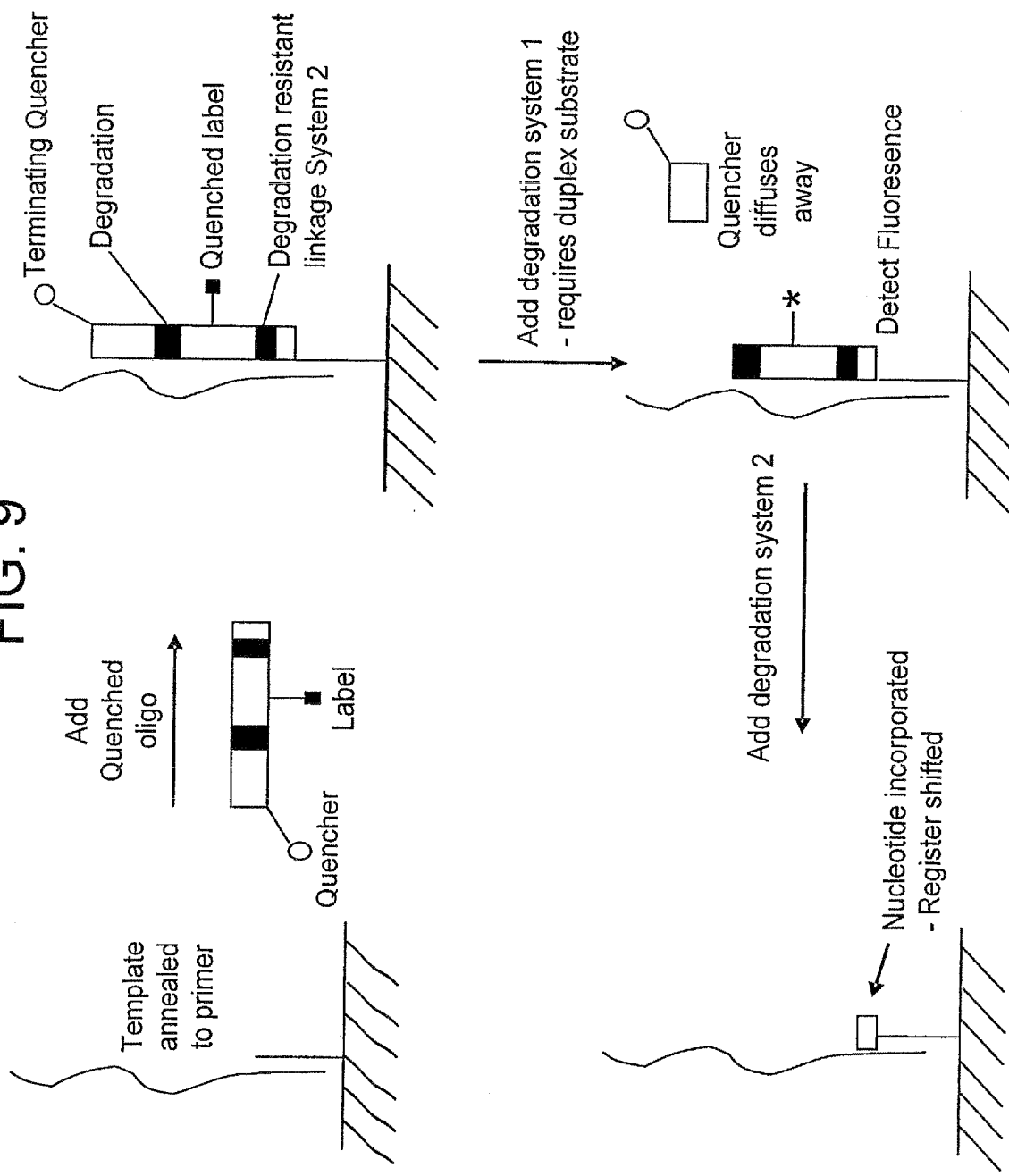


FIG. 10

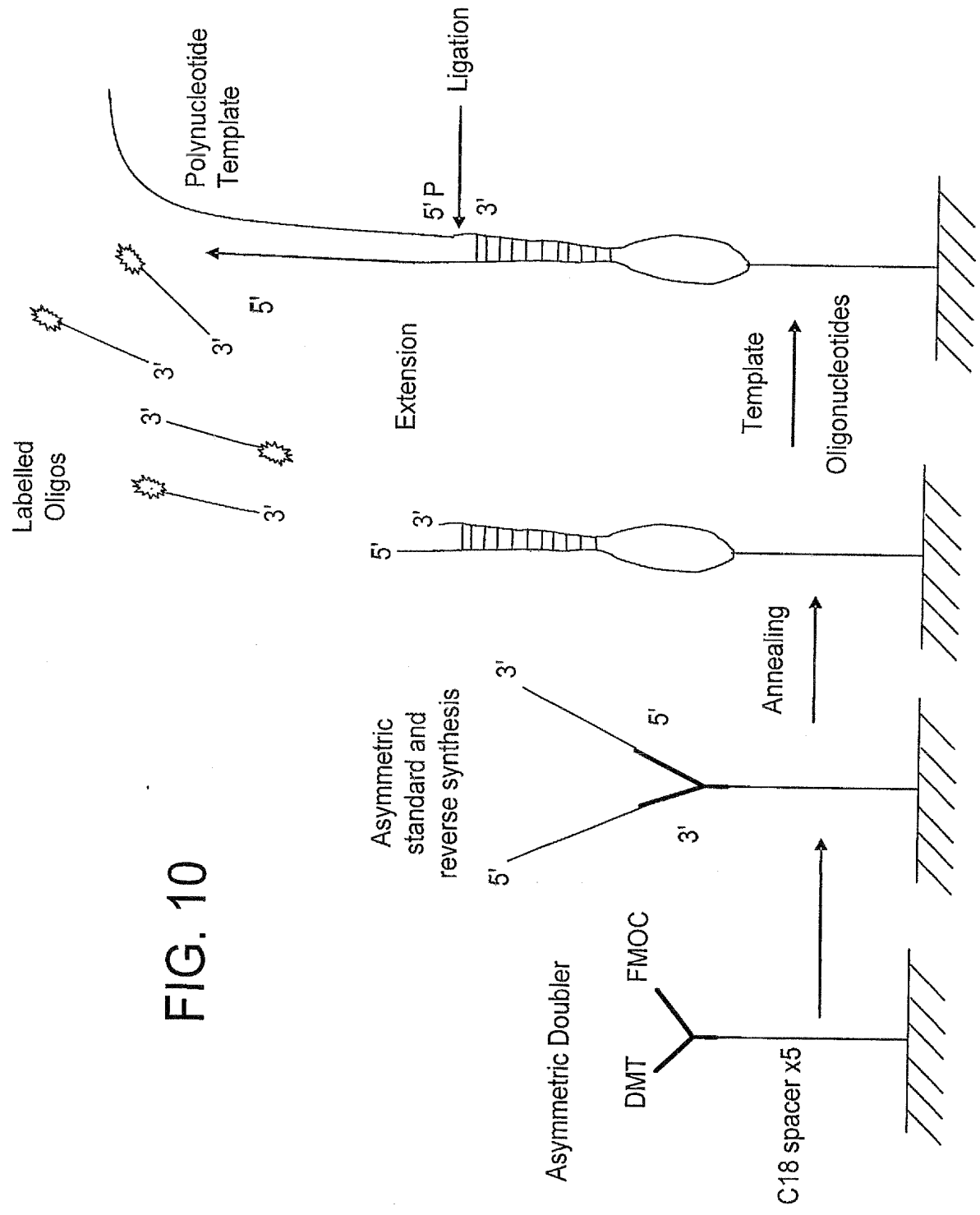


FIG. 11

